

## 4. Disguised Budgetary Transfers through Public Enterprises: A Case Study of the Power Sector in India

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# 4

## **Disguised Budgetary Transfers through Public Enterprises: A Case Study of the Power Sector in India**

### **The Problems at Hand**

In the preceding chapter we saw an analysis of center-state fiscal relationships within India's federalist system focusing on central budgetary transfers to state governments. According to that analysis, both the scale and content of transfers from the center to the various states are strongly determined by the structure of fiscal expenditures on the state level. One conclusion reached from this analysis was that once the states in the so-called Hindi belt, which are characterized by very low per capita levels of social as well as development expenditures, begin to create conditions necessitating that these levels be increased, there will no doubt arise strong demands for across-the-board changes in existing center-state relationships.

However, if we try to expand the horizon of our study to take entire public finance activities of the central and state government into account, the limitations of our conclusion in the last chapter become obvious, since it was reached mainly on the basis of state-by-state comparison of expenditure structure. The conclusion must be modified if a central government either directly or indirectly through the agency of public enterprises comes to play a major role in such sectors over which the state governments have retained jurisdiction. We must also ask the question, what are the impacts of central investment in these enterprises on state fiscal affairs by way of the tax revenues they generate or the infrastructural costs they incur upon state finance?<sup>1</sup> Public financial institutions that are under the central government's supervision are known for giving preference to the advanced states when disbursing their loans.<sup>2</sup> Such are the questions closely linked with the issue of center-state fiscal relations and the

preceding chapter obviously left these factors out of consideration.

Therefore, in order to fill in the gaps appearing in the preceding chapter, it is necessary to account for the entire fiscal activities of the central government, including its own budgetary and extra-budgetary transactions, through central public enterprises, a task yet to be accomplished in the study of center-state fiscal relations in India. This chapter will take up the case of the electric power sector in order to come to a more comprehensive understanding of center-state relations there, and then restate the conclusions offered in the preceding chapter.

Before entering into this discussion, however, it is necessary to explain why the power sector was chosen for this study of center-state relations.

To begin with, there is the consideration of political background. As related in the preceding chapter, it was after the demise of one-party dominance by the Indian National Congress in the mid-1960s that the relations between the center and state governments first became politicized. It was at this time that the central government's actions came under sharp criticism for chipping away at state fiscal jurisdiction in the form of its control over lending, its power to preempt tax revenue sources, and its centrally sponsored schemes.<sup>3</sup> Given such conditions, the electric power sector was one of representative sectors from among those originally under state government initiatives, in which the central government began to increase its role. From the end the 1970s, both the power generation and transmission utilities under the central Department of Power—the National Thermal Power Corporation (NTPC), and the National Hydro-electric Power Corporation (NHPC)—continued to strengthen their control over India's electric power sector. This is one reason why an investigation of this sector is indispensable to examining recent trends in India's center-state relations.<sup>4</sup>

Secondly, it is obvious just from the amount of investment it absorbs that the electric power sector is one very important element determining the fiscal structure, especially the structure of investment expenditures, in every state. As we saw in the previous chapter, the share of expenditure taken up by electric power sector in the wealthier states, like Punjab and Haryana, is generally speaking quite high.<sup>5</sup> It would indeed be interesting to find out how growing participation by the central government in the electric power generation has affected state expenditure patterns.<sup>6</sup>

Next, it is necessary to consider the significance of the national electric supply grid created under an initiative by the central government in general, and the NTPC's participation in the industry in particular. The pros and cons of freight equalization for commodities such as steel, coal, and petroleum have constituted a long-standing point of contention within center-state relations.<sup>7</sup> With the establishment of a national power supply grid, what will be the effect of the nation-wide price equalization of one more fundamental material, electric power? Of course this is a question that goes far beyond center-state relations in its economic implications; but this problem will no doubt come to the

forefront when discussion begins concerning the prices at which the NTPC should supply power to State Electricity Boards (SEBs).

Finally, foreign aid plays a significant role in financing India's electric power sector. In the case where SEBs carry out electric power projects, the question is bound to come up as to what extent the central government should transfer foreign-aid funds to the states in order to cover project costs. In this sense, the electric power sector is an excellent area for investigating center-state relations with regard to the use of foreign-aid funding.

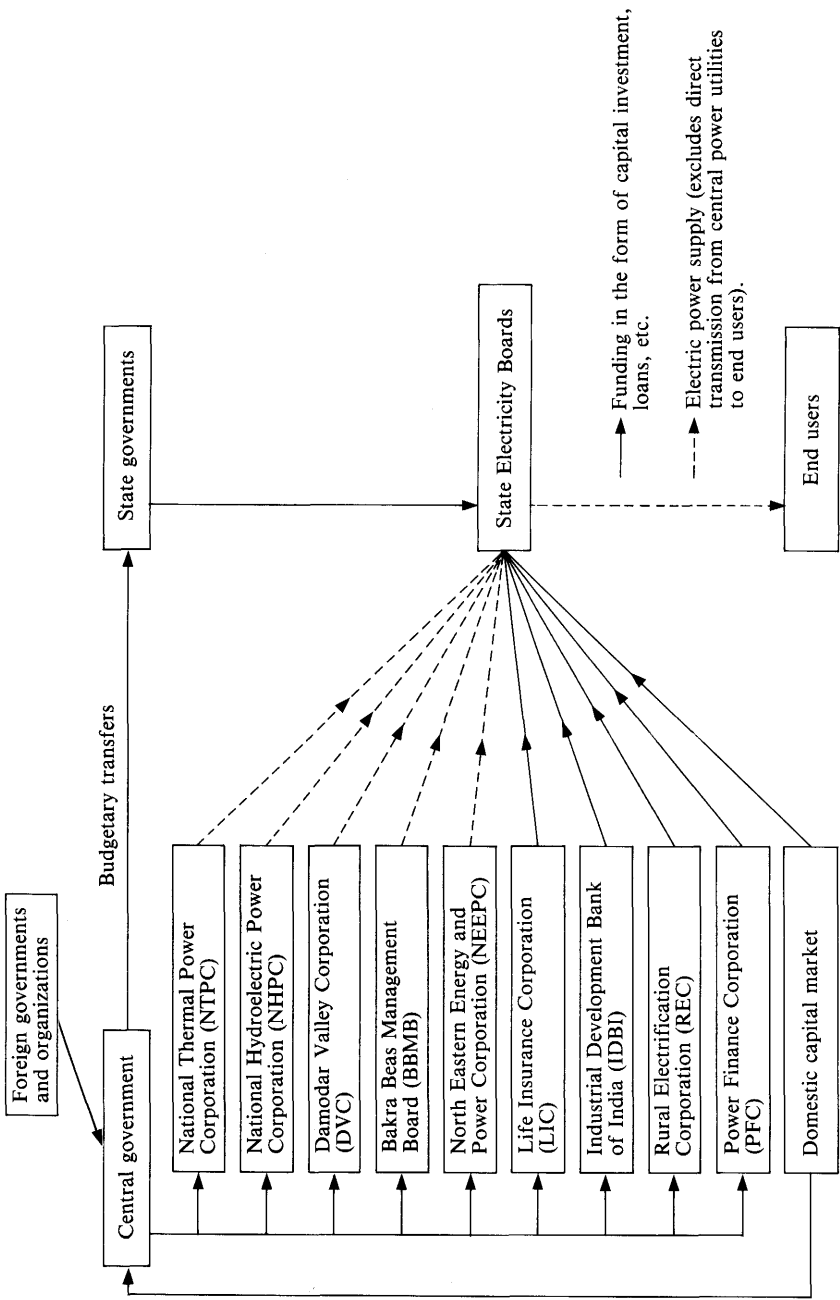
## **The Central Government's Advance into the Power Sector**

### *Center-State Relations in Electric Power Administration*

Concerning the place occupied by the electric power sector within economic administrative affairs, according to the Eighth Schedule of the Indian Constitution, electric power is put in the Concurrent List (List III) involving both the central and state governments. Since national independence, electric power generation and supply has fallen mainly within the administrative jurisdiction of the State Electricity Boards (SEBs). However, up through 1958 all attempts, no matter on what scale, to increase electricity generation capabilities were subject to central government approval. From 1959 on, only power generation projects costing over Rs. 10 million were subject to approval by either the Central Electricity Authority or other related bureaus. In 1985 the minimum project cost requiring approval was raised to Rs. 50 million. Despite these revisions, however, the central government's power of approval over new projects has not changed in principle for more than five decades.<sup>8</sup>

Direct participation by the central government in electricity generation projects began in 1948 with the formation of the Damodar Valley Corporation (DVC) under the Department of Power. This was followed by the Neyveli Lignite Corporation (NLC) under the Ministry of Coal and Steel and the Department of Atomic Energy's construction of atomic energy plants. However, it was only from the time of the establishment of the thermal (NTPC) and hydro-electric (NHPC) corporations in 1975, that the importance of the central government in the electric power generation began to grow rapidly alongside the other organizations that were formed under the Department of Power. Figure 4-1 shows the five power generation corporations that now exist under the department (NTPC, NHPC, DVC, BBMB [Bakra Beas Management Board], and NEEPC [North Eastern Energy and Power Corporation]), the Rural Electrification Corporation (REC, est. 1969), which is in charge of rural power development-related loans (see next section), and the recently formed Power Finance Corporation (PFC, est. 1986).<sup>9</sup> In 1980 increased involvement by the central government was publicly promoted in a report submitted by the Committee on Power (the so-called Rajadaksha Committee) to the Department of Power.<sup>10</sup> It was therefore during the 1980s that the center's advance into the electric power sector

Fig. 4-1 Center-State Relations in India's Electrical Power Sector



Source: Compiled by the author.

TABLE 4-1  
CENTER-STATE PLAN OUTLAYS TO THE POWER SECTOR IN INDIA

Five-Year Plans	Years	Plan Outlays (Rs. 10 million)				Power's Share of Total Public Sector Outlays (%)
		States	Union Territories	Center <sup>a</sup>	Total	
First	1951-56	238.82	3.79	17.39 (6.7)	260	13.27
Second	1956-61	436.94	9.33	13.73 (3.0)	460	10.00
Third	1961-66	1,138.65	27.96	85.68 (6.8)	1,252.29	14.60
Annual plans	1966-69	990.00	44.00	189.00 (15.5)	1,223.00	18.10
Fourth	1969-74	2,495.32	56.68	379.00 (12.9)	2,931.00	18.06
Fifth	1974-79	6,595.33 <sup>b</sup>	—	804.15 (10.9)	7,399.48	18.08
Annual plans	1979-80	1,817.11	41.65	381.77 (17.1)	2,240.53	18.05
Sixth	1980-85	13,065.30	273.57	4,959.69 (27.1)	18,298.56	16.70
Seventh	1985-90	22,686.76	535.16	11,051.54 (32.2)	34,273.46	19.00

Source: Ministry of Energy, Department of Power, *Conference of Power Ministers of States, January 23-24, 1989* (New Delhi, n.d.), p.175.

<sup>a</sup> Figures in parentheses are percentages of the total.

<sup>b</sup> Includes Union Territory outlays.

became a very important issue in center-state relations. While the main reason why the central government got involved in the power sector was the poor performance of SEBs, state governments still interpreted the move as an infringement on their previously established authority. In the recently issued report of the Commission on Centre-State Relations (the so-called Sarkaria Commission; see note 5 to Chapter 1), that covers the whole area of fiscal relationships between the central government and the states, we find a proposal offered by Madhya Pradesh government suggesting that transmission of electricity 10kv or less, rural electrification projects and privately constructed power plants be placed under independent state jurisdiction, while power generation and development remain as a concurrent item between the center and the states.<sup>11</sup> The following section is an account of just how significant the central government's advance into the power sector actually was.

#### *Center and State Shares of Power Generation Capacity*

To begin with, let us examine the share taken up by electric power sector in plan outlays and the amount provided by the central government. Table 4-1 shows the rising share of such outlays within the total plan outlays made by the power sector as a whole, which under the Seventh Five-Year Plan came to 19 per cent. A detailed accounting of these outlays further shows that the increasing share from plan to plan mostly went to finance projects and organizations controlled and sponsored by the central government, while the states' share remains more or less constant at about 14-15 per cent of the total plan outlays.

The central government's jurisdiction over power-related projects extends over

TABLE 4-2  
EXPANDED INSTALLED POWER CAPACITY AND CENTER-STATE SHARES

	Sixth Five Year Plan, 1980-85	Seventh Five Year Plan, 1985-90	Eighth Five Year Plan (Plan Target)
Central government	3,160	9,320	17,695
NTPC	2,200	6,390	11,590
Total share (%)	22.2	28.7	30.4
State governments	11,066	12,925	20,451
Total share (%)	77.8	71.3	69.6
Total	14,226	22,245	38,141

Source: The same as Table 4-1.

several departments and ministries. The Department of Power is the largest, but by no means has exclusive control over centrally funded projects. Comprehensive statistics are not available on how much control various agencies, including state governments and private corporations, hold within India's power industry; however, according to one figure for 1981, the central government accounted for 10 per cent of the country's electric power generation (excluding the captive generation of the railways).<sup>12</sup> The organizations under the central government, with the exception of DVC, do not usually provide power directly to end users, but rather sell almost all the power they generate to the SEBs. Therefore, the central government controls the portion of the power industry that is least susceptible to economic loss. According to data that will be presented later on, the importance of the central government in the power generation sector is growing on the strength of NTPC. For example, Table 4-2 shows additional installed power capacity under the Sixth, Seventh, and Eighth Five-Year Plans. Furthermore, according to a recent NTPC report, its generated power output for 1988/89 came to 12.9 per cent of the national total, and its additional installed capacity for the same year was 2,208 MW, or 54 per cent of total additional capacity for the year.<sup>13</sup> As a result of this growth, it is estimated that by the end of the Eighth Five-Year Plan organizations under central government will be accounting for 25.4 per cent of the national power output.<sup>14</sup> The move on the part of the central government to increase its importance within the power sector is confirmed by the Rajadakhsha Committee's report, which states that by the year 2000 the central government will be in control of 45 per cent of the country's total installed power generation capacity.<sup>15</sup>

The effects of the increases being carried out in installed capacity by the central government, mainly NTPC, are by no means uniform from power region to power region.<sup>16</sup> Despite the fact that a national power grid has been envisioned for the future, in reality both NTPC and NHPC are limited only to locations that can provide adequate coal, thermal, and water resources.<sup>17</sup> Table 4-3 shows that both the northern and western power regions have benefited the

TABLE 4-3  
CENTER-STATE INSTALLED GENERATION CAPACITY FOR FOUR POWER REGIONS, MARCH 1990  
(MW)

	States (SEBs)	Center <sup>a</sup>	Total	Central Organizations
Northern	13,808.9 (66.6)	6,935.0 (33.4)	20,743.9 (100.0)	NTPC 3,600, BBMB 2,705, NHPC 630
Western	18,802.5 (86.5)	2,940.0 (13.5)	21,742.5 (100.0)	NPTC 2,940
Southern	15,659.1 (88.2)	2,100.0 (11.8)	17,759.1 (100.0)	NTPC 2,100
Eastern	6,618.3 (73.1)	2,434.0 (26.9)	9,052.3 (100.0)	NTPC 600, DVC 1,834

Source: Centre for Monitoring Indian Economy, *Current Energy Scene in India* (hereafter *Current Energy*), May 1988, p.2-29; *ibid.*, July 1990, p.2-28.

Note: Figures in parentheses are percentages.

<sup>a</sup> Includes only projects under the Department of Power.

most from the central government's expansion of its installed capacity, while the eastern and southern power regions have been relatively ignored within this expansion. Moreover, regional power deficit patterns were improved in the northern and western regions during the 1980s, as opposed to a relative worsening in the southern region and no change at all in the eastern region. This situation is directly related to the start of positive activities by NTPC.<sup>18</sup> India will soon be entering a stage at which the conditions surrounding regional and state power supplies will no longer be seen as a problem solely for the SEBs. Furthermore, it is doubtful if the different influences on the country's power regions exerted by the increased participation of the central government in the power industry can be solved merely by the completion of a national power grid, as will be discussed below.

The organizations under the control of the central government, especially NTPC, perform one more important function, namely the planning and design of a national power grid that will link together India's five power regions. Work is proceeding to link the southern and western power regions with the northern and western regions using NTPC's 400 kv transmission lines. At the present time partial power transmission is being carried out across regional borders, and DVC, which has from the beginning been a centrally controlled enterprise, performs the function of integrating the system to a certain extent in the eastern region. However, the Department of Power's annual reports testify to the fact that over the four years ending in 1988/89, the scale to which the existing power grid accommodates inter-regional power transfer among the four major power regions has only come to about 1.5 per cent of the total amount generated in these regions,<sup>19</sup> signifying that a nationwide electric power network has yet to be established in India. What the impact will be on the regional power situation and state power development plans when the national power grid is completed depends on NTPC's pricing policy and will no doubt become an important issue in center-state relations.



## Center-State Relations in the Power Sector

### *Overview*

In the preceding section, we viewed in quantitative terms the relative importance of the center and the states in the power sector. Figure 4-1 graphically summarizes both the financial and administrative relationships between the center and the states in this sector. The figure shows that in the sector as a whole, besides the direct power-related central budgetary transfers to the states, these two entities are involved indirectly in a number of very diverse relationships. Inter-linked relations between the central government and state governments, including all of the organizations under each control, is not limited merely to the power sector, but is probably true regarding every sector in which the center and states find themselves participating together.

To begin with, SEBs, which supply power to end users, form the nucleus of India's power-related enterprises, and their operations, as indicated by the solid lines in the figure, depend on funds in the form of loans from state governments and centrally controlled public financial institutions, REC and PFC in particular. The fact that SEBs do not have internal capital funds is often cited as their weakest point managerially speaking. Be that as it may, as of March 1985 67.2 per cent of loans outstanding to SEBs had been made by state governments, 16.1 per cent had come from electricity bonds, 7.5 per cent from REC, 4.6 per cent from LIC (Life Insurance Corporation), and the remaining 4.5 per cent from other sources.<sup>20</sup> Yearly loans to SEBs also tended to come from these same sources at about the same percentages; however, in 1985 REC and LIC percentages changed somewhat to 8.3 and 2.1 per cent respectively, signifying an increase in the importance of REC in financing SEBs.<sup>21</sup> However, by far the most important route for funding SEBs remains state government loans to them, coming out of states' capital expenditures, a large part of which comes in turn from central government plan transfers.

On the other hand, SEBs also purchase electric power from the five centrally controlled wholesale suppliers, NTPC, NHPC, DVC, BBMB, and NEEPC, which are under the control of the Department of Power (DVC also supplies directly to end users.) The commercial transactions that arise between SEBs and these wholesalers form a part of center-state relations within the power sector.

One more point that ranks importance in center-state relationships in this sector is the problem of foreign aid. As indicated in Figure 4-1, foreign-aid funds that go to finance state sponsored projects are routed through the central government. Foreign-aid funds are first pooled at the center and portions thereof are then handed over to the states in the form of "additionalities" to state plan fiscal sources. In the case of the power industry, which depends heavily on loaned capital, the transfer of loans supplied by foreign governments and internation-

al agencies from the center to the states is a very important issue to consider.

In view of the above summary, the three sections that follow will focus on the major issues of (1) NTPC's wholesaling activities to the states, (2) loans from REC to SEBs, and (3) the distribution of foreign-aid funds to the states in the power sector.

### *NTPC Power Wholesaling Activities*

#### *The issue of pricing*

One vexing problem for NTPC since the time of its establishment has been how to set up a pricing policy. Should prices reflect differing costs among NTPC's various plants, or should prices be uniform nationwide? Moreover, if a uniform price policy is adopted, should pricing be decided at the point of generation, or should it be decided at the point of delivery to SEB networks. From the standpoint of SEBs, what happens at NTPC plants is a completely extraneous factor, therefore pricing based on varying production costs from plant to plant is viewed as unfair. Furthermore, the states and SEBs insist that electric power, like steel and petroleum products, should be subject to uniform pricing and that from the viewpoint of national unification and market integration, NTPC plants should be considered as a single production unit and as such should adopt a single, uniform pricing policy. In reality, though newer plants incur higher costs of production, it has been very difficult for NTPC to revise its delivery prices to SEBs every time a new plant is built. Finally, in 1985 the central government decided to investigate this problem by setting up a committee to conduct hearings to air the views of each SEB and state government.<sup>22</sup> It should be no surprise that an overwhelming number of the SEBs and state governments that sent their opinions to this committee supported uniform pricing at the point of delivery. The conclusion of the committee was that, in principle, uniform pricing at the point of generation could be condoned, but the execution of such a policy was made difficult by the fact that the national power grid had still not been completed. Nevertheless, since power transmission costs could be viewed as uniform within a power region, the committee recommended that a regionally uniform pricing system be adopted in NTPC's wholesaling activities.<sup>23</sup>

In spite of the committee's recommendation, a pricing agreement still has not been reached between NTPC and the Regional Electricity Boards, who represent SEBs in the negotiations. Particularly, when 500 MW generators went into operation at NTPC plants in 1987–88, pricing based on 200 MW generators began to depart significantly from reality.<sup>24</sup> The NTPC pricing issue has now been handed over to the Ministry of Industry's Bureau of Industrial Costs and Prices (BICP) for determination, and this authority's decision is still pending. This is a problem that naturally arose when a corporation under central government control became a vendor of electric power. Here we are presented with one more case for the continuing debate over uniform pricing for fun-

TABLE 4-4  
SEB ARREARS AND NTPC SALES

(Rs. 10 million)

Year (Ending March)	SEB Payments Due	Sales
1987 <sup>(1)</sup>	244.16	637.81
1988 <sup>(2)</sup>	323.69	862.21
1989 <sup>(2)</sup>	444.75	1,274.82
1990	951.19 <sup>(3)</sup>	1,782 <sup>(4)</sup>

Source: For (1), National Thermal Power Corporation, *12th Annual Report, 1987-88* (1988), p.22. For (2), idem, *13th Annual Report 1988-89* (1989), pp.11-20. For (3), *Current Energy* July 1990, p.2-20. For (4), Ministry of Industry, Bureau of Public Enterprises, *Memorandum of Understanding between Public Sector Undertakings and Government of India for 1989-90* (New Delhi, 1989), p.45; figure is sales target for the year.

damental raw materials like steel and petroleum manufactured within the public sector.

#### *Financial arrears incurred by SEBs*

The problem, however, is more complex than the failure to come up with principles to be used in price determination, for SEBs are also in serious financial arrears to NTPC. Table 4-4 summarizes accumulating payments due to NTPC by SEBs compared to the former's yearly sales figures.

NTPC is rated as one of India's superior public enterprises on a par with the Oil and National Gas Commission; however, the problem of arrears has gradually begun to take its toll on NTPC's business performance. The origin of the problem lies in managerial difficulties within the SEBs, which are also far behind in their payments to other public enterprises such as NHPC and Coal India. In terms of Figure 4-1 the basic cause of these arrears can only be understood by looking into the relationship between SEBs and their end users. The SEB managerial problem is not, however, the focus of this chapter, which will look at the problem in connection with center-state relations.

Table 4-5 is a state by state breakdown of the payments owed to NTPC and NHPC by SEBs. The table shows that about 62 per cent of the arrears have been incurred by the five largest defaulter states: Uttar Pradesh, Bihar, Haryana, Madhya Pradesh, and Rajasthan. Three of these states are located in the northern power region, one is located in the eastern power region, and one in the western power region. With the exception of Haryana, a state with a better fiscal basis, all of four states are located in the Hindi belt, a region of states marked by similarities in their fiscal affairs as observed in the previous chapter.<sup>25</sup> While weak overall fiscal bases causing weakness in SEB finances can be seen as the basic cause of the arrears problem, it is also possible to interpret the situation in terms of financial transfers being made in concentrated amounts to these states from the central government in the form of arrears. In fact during fiscal

TABLE 4-5  
PAYMENTS DUE TO CENTRAL POWER CORPORATIONS BY SEBs

	(Rs. million)		
	NTPC	NHPC	Total
Northern region			
Uttar Pradesh	2,849.4	—	2,849.4
Rajasthan	1,010.2	—	1,010.2
Delhi	426.7	54.5	481.2
Punjab	30.3	191.7	222.0
Haryana	712.5	343.4	1,055.9
Himachal Pradesh	47.5	117.8	164.3
Jammu and Kashmir	104.8	483.8	588.6
Chandigarh	9.3	—	9.3
Western region			
Madhya Pradesh	1,035.4	—	1,035.4
Maharashtra	448.0	—	448.0
Gujarat	302.0	—	302.0
Goa	1.1	—	1.1
Southern region			
Andhra Pradesh	49.4	—	49.4
Kerala	275.2	—	275.2
Tamil Nadu	496.8	—	496.8
Karnataka	65.5	—	65.5
Eastern region			
West Bengal	271.0	92.1	363.1
Bihar	959.7	291.6	1,251.3
Orissa	178.2	106.7	284.9
Sikkim	4.0	3.2	7.6
Damodar Valley Corporation	234.9	65.1	300.0
Assam etc.		300.5	300.5
Total	9,511.9	2,050.4	11,562.3

Source: *Current Energy*, July 1990, p.2-20.

year 1988/89 the central government took steps to cancel out Rs. 1.56 billion outstanding to NTPC and NHPC using plan grants earmarked for those states seriously in arrears.<sup>26</sup> In other words, the back payments owed by SEBs to the central power corporations are being, however subconsciously, placed both at the center and state levels within the context of center-state budgetary transfers. Therefore, we can go as far as to say that the arrears that have accumulated in the Hindi-belt states are functioning as central loans to the SEBs of these states in the nature of deferred repayments.

Because India's power industry, especially NTPC, is receiving foreign-aid capital funds from such organizations as the World Bank, recently the World Bank has stated that it will continue this aid only on the condition that a solution to the SEB arrears problem be found.<sup>27</sup> What this means is that foreign aid to finance NTPC's new 500 MW generator at Farrakka and the Vindhyachal

TABLE 4-6  
TWO EXAMPLES OF CONDITIONS IMPOSED BY REC IN LENDING  
WORLD BANK FUNDS TO THE STATES

Example	Amount	World Bank Conditions	REC Conditions
IDA, First loan (572 IN), July 1975	U.S.\$57 million	0.75% service charge, 10-year period of deferment, 40-year term	(1) 6.25–9.25% yearly interest (2) 2–7 year period of deferment (3) 8–35 year term
IDA, Second loan (911 IN)	U.S.\$175 million	0.75% service charge 10-year period of deferment 40-year term	(1) 7.25–9.25% yearly interest (2) 2–5 year period of deferment (3) 8–20 year term

Source: Central Board of Irrigation and Power, *Symposium on Financial Viability and Generation of Financial Resources of Electricity Boards* (New Delhi, 1986), p.104.

power transmission plan now depends on whether or not NTPC and the World Bank can come to terms on a solution for the SEB arrears problem. As mentioned previously, the arrears problem should be considered first within the framework of SEB management in general; however, even here, we cannot ignore the fact that since most of the arrears are being accumulated by SEBs located in India's specially designated regions, the advance of the central government into the electric power sector has functioned in the role of supplementing power-related capital investment in the Hindi belt, not SEBs in general.

### *REC Loans to SEBs*

One more problem related to center-state relations in the power industry is the increasing importance of loans issued to SEBs by the Rural Electrification Corporation (REC). While rural electrification is a project within the jurisdiction of state governments and SEBs, when it comes to funding the programmes, states depend heavily on financing from the centrally controlled enterprise, REC. However, REC is not a body that directly carries out rural electrification projects, but rather lends capital to SEBs to enable them to carry out such projects. The fiscal relationships that arise around REC in the area of rural electrification involve REC borrowing money from the central government and then lending it to SEBs.

REC's financial services involve deciding standard loan amounts for each kind of project, terms of loans, periods of deferment, interest rates, and expected profitability of each project. The major problem that REC encounters with SEBs is deciding interest rates. The average rate of 11 per cent charged by REC is higher than the 9 per cent rate charged on direct loans from the central government, and occasionally REC will borrow money at lower interest

TABLE 4-7  
STATE BORROWING FROM REC, MARCH 1986

State	(Rs. 100,000)				
	Amount Borrowed	Amount Paid	Loans Outstanding	Villages Electrified <sup>a</sup> (%)	Rural User Households <sup>b</sup> (%)
Madhya Pradesh	370.9	52.2	318.7	75.7	6.9
Uttar Pradesh	303.6	37.9	265.6	68.3	4.0
Andhra Pradesh	228.9	33.7	195.2	97.4	12.5
Bihar	211.8	38.0	173.8	63.0	3.5
Maharashtra	196.9	42.0	154.9	98.2	24.1
Rajasthan	179.2	32.0	147.3	68.5	8.7
West Bengal	162.5	27.0	135.5	63.5	7.0
Orissa	145.0	26.4	118.6	61.5	13.0
Assam	124.8	9.1	115.7	84.2	n.d.
Punjab	137.0	25.6	111.4	100.0	50.6
Karnataka	118.3	16.6	101.8	97.8	21.3
Gujarat	119.3	22.2	97.1	98.8	30.8
Tamil Nadu	113.2	31.0	82.2	99.9	26.0
Himachal Pradesh	72.7	6.0	66.7	99.8	51.1
Haryana	73.0	17.9	55.2	100.0	41.1
Kerala	48.2	7.9	40.3	100.0	23.0
National total (all states)	2,733.4	441.7	2,291.7	77.1	14.7

Source: Rural Electrification Corporation, *18th Annual Report, 1986-87* (New Delhi, 1987), p.30. For village electrification data, Tata Services Limited, *Statistical Outline of India, 1989-90* (Bombay, 1989), p.70. For household data, Registrar General and Census Commissioner of India, *Census of India, 1981, Series-1 India, Part-VIII A and B (v), Household Tables* (New Delhi, 1988).

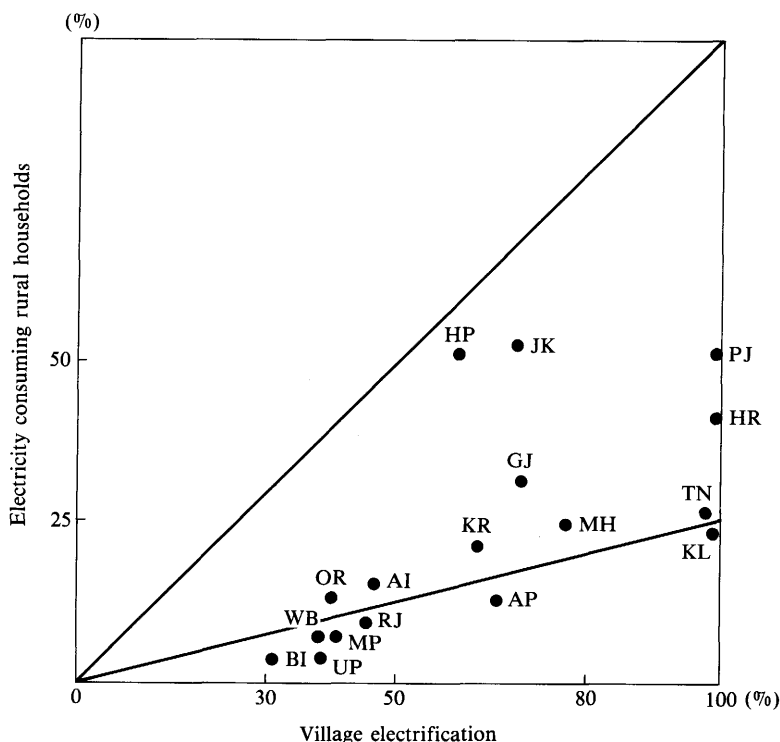
<sup>a</sup> Based on 1988-89 figures.

<sup>b</sup> Based on 1981 figures.

rates from the World Bank, suggesting that it is possible for REC to lower its interest charges. Table 4-6 shows the large differences between the conditions imposed by the World Bank (or International Development Association) when lending capital funds to REC and conditions imposed on the states when REC lends this money to them. Therefore, we can conclude that the reason for REC lending activities is not to provide easy terms for its customers, but rather to assist in the central government's effort to create independent capital funds for the low profitability area of rural electrification and provide aid to rural electrification programmes in capital-deficient states. Table 4-7 reflects this purpose by showing that the more agriculturally developed states of Punjab, Haryana, Gujarat, Karnataka, and Tamil Nadu have received relatively little capital via REC loans.

The major customers using the financial services provided by REC, which was established in 1969 but began lending on a large scale during the late 1970s and 1980s, are agriculturally underdeveloped states that missed out on the first

Fig. 4-2. Differences between Village and Rural Household Electrification Percentages, 1981



Sources: For household data, Registrar General and Census Commissioner of India. *Census of India 1981, Series-1, India, Part-VIII A and B(v), Household Tables* (New Delhi, 1988). For village electrification, Tata Service Ltd. *Statistical Outline of India* (Bombay, 1982), Table 61.

Notes: AP = Andhra Pradesh, BI = Bihar, GJ = Gujarat, HP = Himachal Pradesh, HR = Haryana, JK = Jammu and Kashmir, KL = Kerala, KR = Karnataka, MH = Maharashtra, MP = Madhya Pradesh, OR = Orissa, PJ = Punjab, RJ = Rajasthan, TN = Tamil Nadu, UP = Uttar Pradesh, WB = West Bengal, AI = All India (average).

phase of the Green Revolution. REC's lending performance is evaluated according to percentage of "villages electrified."<sup>28</sup> Table 4-7 shows that recently the gap has been closing between the agriculturally advanced and backward states in village-level electrification diffusion rates, and it is probably correct to credit the effects of positive efforts made by REC in bringing about such a trend. At least this is the tone that dominates REC annual reports. On the other hand, Figure 4-2 shows another side to the problem in a graphic comparison of the percentage of rural households actually consuming electricity with village elec-

trification diffusion rates. The average difference between the two figures is 1 to 4, that is, in growth terms, for every 4 per cent rise in village electrification there is on the average only 1 per cent increase in household electricity use. A central government appointed committee dealing with the issue of rural electrification has also indicated that a paradoxical pattern is appearing in which the rate of village unit electrification is improving, while the rate of village households using electricity is declining.<sup>29</sup> This situation probably describes best what is happening in underdeveloped states with low rates of household electrical consumption. Even though there are no household statistics available later than 1981 (see Table 4-7), these figures indicate better than the village statistics that REC has clearly directed its lending activities to underdeveloped states with large rural populations. Due to the difficulty of achieving marked improvements in the number of electricity consuming households, REC's real performance is not what is indicated by the rise in electrification on the village level. Also, for this very reason REC's lending activities will no doubt continue to be directed at states like Madhya Pradesh, Uttar Pradesh, Bihar, and Rajasthan, the heavily populated large states located in the Hindi belt.

## **Foreign Aid and State Power Projects**

### *Foreign-Aid Loans to the States*

With the advance of the central government into the electric power sector, central government-controlled organizations like NTPC naturally found themselves with a larger share of foreign aid funds earmarked for the development of this sector. According to Department of Power annual reports, the share of foreign currency going yearly to central government-controlled organizations was 48.2 per cent in 1985/86, 42.8 per cent in 1986/87, 20 per cent in 1987/88, and then jumped to 88 per cent in 1988/89.<sup>30</sup>

This rise in the share of public borrowing by the central government is a recent marked tendency in India's public finance and reflects the broad scale advance of the central government into areas in need of investment expenditures like the electric power sector.

Besides the foreign aid earmarked for central government-controlled organizations and projects, there is also the problem of central government loans to state governments, which includes, foreign-aid funds for state-sponsored power projects. Let us look first at the general principles governing transfers of foreign aid to the states in India and how they are applied in the case of the power sector.

As we have already seen, applying for and receiving foreign aid in India falls within the exclusive jurisdiction of the central government. Foreign-aid funds are first cleared through the Ministry of Finance's Department of Economic Affairs and then, if they are to be spent for a power project, they will be transferred to the Department of Power. Even if the funds are for the purpose of



state-sponsored projects, they will still be routed through a central government agency. In general, only 70 per cent of the aid going for routine state-sponsored projects will be actually transferred to the states. Because the amount of the original aid comes to only 50 to 70 per cent of the total costs of any project, the funds actually transferred usually end up covering less than 50 per cent of the total cost. This payment is called an "additionality," that is, a fiscal source received apart from the budgetary transfers allotted for state five-year plans under the Gadgil Formula (see note 3 to Chapter 3). Additionalities are usually handed over to the states (according to a pattern similar to the Gadgil Formula) to the tune of 70 per cent in the form of loans and the remaining 30 per cent in the form of grants.<sup>31</sup>

We have also seen the relending of foreign-aid funds to such state agencies as SEBs by centrally controlled enterprises like REC. Similar discrepancies in interest rates arise where foreign loans to the central government carry with them a weighted average rate of 2.3 per cent interest, whereas the central government lends to the states at over 9 per cent.<sup>32</sup> Table 4-8 represents an attempt to confirm these procedures in practice using the case of West Bengal. Additionalities comprise 10 per cent of all the transfers received by the West Bengal government from the central government. According to the Sarkaria Commission's report, average share for all the states was 12 per cent during 1986/87.<sup>33</sup> Table 4-8 also shows that the principle of 70 per cent loans and 30 per cent grants for additionalities is properly followed for West Bengal.

Under these lending procedures the central government is profiting from the interest it charges on foreign-aid funds. The purposes behind such a practice include (1) to insure equal burden-sharing among the states for foreign-aid loans with differing conditions, (2) to keep the effects of changing loan conditions and fluctuating foreign exchange rates from directly influencing state finances, and (3) to pool a portion from foreign-aid sources for distribution to underdeveloped states, thus preventing them from falling even farther behind.<sup>34</sup>

Such a framework has obviously prompted a wave of dissatisfaction from the states. In response to such unhappiness, 100 per cent of the foreign-aid funds earmarked for the social services sector, including the family welfare programme were for the first time transferred to the states in 1989.<sup>35</sup> State governments continue to demand that the same practice be adopted for the power sector and agricultural projects as well, and concerning the 70 per cent and 30 per cent additionality formula, the states are pushing for increases in the share occupied by grants.<sup>36</sup>

### *The Case of the Power Sector*

We should mention, however, that the foreign-aid lending practices described above have been determined according to central government discretion, not by law. This is why we do see cases of 100 per cent transfers to the states even for power projects. Examples include the Ampara B project sponsored by the

TABLE 4-8  
THE FOREIGN-AID COMPONENT IN CENTRAL TRANSFERS TO THE STATES:  
WEST BENGAL DURING THE 1970s and 1980s

	(Rs. 10 million)						
	1974/75– 1978/79 Total	1985/86	1986/87	1987/88	1988/89 <sup>a</sup>	1989/90 <sup>b</sup>	1985/86– 1989/90 Total
Foreign-aid component	4.4	14.8	23.5	18.9	47.6	42.7	147.6
Grant	0.4	4.5	7.1	5.7	14.3	12.8	44.3
Loan	4.0	10.4	16.5	13.3	33.3	29.9	103.3
Plan transfer	393.3	237.9	284.8	304.4	374.8	391.3	1,593.3
Grant	125.1	108.0	122.9	129.0	152.5	162.2	674.5
Loan	268.2	129.9	161.9	175.4	222.3	229.2	918.8
Share of loan in foreign-aid component (%)	90.9	70.2	70.2	70.4	70.0	70.0	70.0
Share of foreign-aid component in plan transfer (%)	1.1	6.2	8.3	6.2	12.7	10.9	9.3

Source: Government of West Bengal, Finance Department, *Statement Showing the Progress of Development Schemes under Seventh Five-Year Plan*, Calcutta, 1989–90 edition.

<sup>a</sup> Revised forecast.

<sup>b</sup> Budget forecast.

SEB of Uttar Pradesh, where foreign aid was received from Japan's Overseas Economic Cooperation Fund and the Uran gas turbine project in Maharashtra funded by West Germany's KfW.<sup>37</sup> Therefore, the problem lies fundamentally within the discretionary powers of the central government.

One case that exemplifies the center-state friction caused by the discretionary nature of central transfers of foreign-aid funds to the states is the Bakreshwar Thermal Power Project, which was initiated by West Bengal government as part of its Seventh Five Year Plan.<sup>38</sup> The Bakreshwar project was planned around forecasts of possible power shortages during the following Eighth Five Year Plan period. It involved the construction of a thermal power generation plant with an installed capacity of 840 MW in the district of Birbhum, West Bengal. After it was decided to cover 70 per cent of the project's costs with foreign-aid funding from the USSR, the central government stipulated that the plant be put under NTPC management because, in its thinking, projects involving foreign aid should not be exclusively state controlled. West Bengal opposed this move, insisting that because the project was designed to meet only state energy needs, the plant should be a state-run enterprise. It therefore decided to embark on the project during 1990/91 without any financial support from the central government. However, with the formation of the V.P. Singh government (supported by the West Bengal's ruling Left-Front parties) as a result of the Union Parliament election of December 1989, the central government aban-

done any further attempt to block the Bakreshwar project. In July 1990 the Indian government reached an agreement with the Soviet Union to borrow one-third of the estimated Rs. 12 billion required to cover the costs of the facility.<sup>39</sup> When considered from the history of the foreign-aid component within India's power sector, the central government's initial position on the Bakreshwar project can be judged as clearly unfair. The major problem here is that there exists no established standards concerning how and under what conditions the central government shall transfer foreign-aid funds to the states. This lack of standard procedure was made very clear in the case of the Bakreshwar project, when the central government, or more precisely the Indian National Congress Government, took action towards a state government development project based mainly on political considerations.

From the standpoint of the aid donors, such center-state relations probably do not deserve very deep consideration as a problem subject to domestically settled solutions. However, as to the way in which transfers are made from the central government to the states, it would behoove state governments to begin reexamining these relations in terms of their indebtedness to the central government. In the power sector the dependence on foreign-aid funding is strong, so strong as to have the problem of the central government lending capital to the states exerting significant influence on the nature of center-state relations within that sector. In spite of such possible consequences, the Sarkaria Commission has stated that the existing general practices governing transfers of foreign aid to the states need not be changed.<sup>40</sup>

### **Conclusion: Public Enterprise as an Intermediary in Center-State Relations**

In an attempt to expand our view of center-state fiscal relations in India through a study of the respective roles of these two entities in the electric power sector, we may summarize the main points of this chapter as follows.

First, while not directly connected with center-state fiscal relations, actual relationships do in fact exist that could be transformed into fiscal relations or at least supplement those relations. The problem of huge back payments due to NTPC by SEBs, notably in the Hindi-belt states, is one case in point. An inadequacy of investment expenditures to the power sector out of state coffers is a characteristic feature of the Hindi-belt states, a point that was covered in the concluding section to Chapter 3.

Secondly, in the background to the appearance of such *de facto* fiscal relations is the problem of SEB management, especially the situation of those SEBs, which tend to concentrate in the underdeveloped state overburdened with rural electrification projects. Therefore, if the managerial problems of SEBs are not aired, the origins of their arrears to NTPC and dependency on loans from REC cannot be clarified. This, however, is an important problem to be taken up in more detail.

Thirdly, the advance of the central government into the power sector has resulted in an increase in the share of centrally funded investment and an expansion of foreign-aid funds earmarked for use by the center. Furthermore, the more or less absolute authority held by the central government over the application and receipt of foreign aid has created friction between the center and states over the development of the power sector in the states that depends strongly on foreign-aid funding. A classic example of such friction is the Bakreshwar project in West Bengal.

Finally, together with the advance of the central government into the power sector, factors like problems laying out uniform pricing policy by organizations under central control have arisen, which exert grave influence on the India's regional economy as a whole.

## Notes

- 1 State-by-state distribution of investment in centrally managed public enterprises may be found in Commission on Centre-State Relations, *Report, Part II* (1987) (hereafter referred to as *CCSR2*). Of the memoranda issued by the states and contained in this report, the most quantitatively detailed one is that by the Rajasthan state government. According to the memorandum, up until the end of fiscal year 1983, the three states of Madhya Pradesh, Bihar, and Maharashtra alone were the recipients of 47 per cent of all centrally financed public enterprise investment (*CCSR2*, pp.445–46).
- 2 This is a point that has caught the close attention of the state governments. Public financial institutions, such as the Industrial Development Bank of India, provide 40 per cent of their total financial outlay to the three most industrialized states of Maharashtra, Gujarat, and Tamil Nadu (*CCSR2*, p.444).
- 3 See Chapter 1, p.10 and Chapter 3, p.34.
- 4 In this chapter, we will use one million watts per hour (MW) and kilovolts (kv) as our basic units of measuring electricity. These units are in general use throughout India.
- 5 See Chapter 3, p.46.
- 6 This type of methodology used for the Indian case is less suitable for analyzing what is happening in Pakistan, where the electric power industry is directly under the centrally controlled Water and Power Development Authority (WAPDA). This point will be covered in more detail in the following chapter.
- 7 One representative example is West Bengal, a state dissatisfied with the fact that despite freight equalization of steel and coal, its main products, similar measures have not been taken on such production materials as raw cotton, which is in short supply there.
- 8 Commission on Centre-State Relations, *Report, Part I* (1988) (hereafter *CCSR1*), pp.371–72.
- 9 Details concerning these organizations can be found in the Department of Power's *Annual Report*.
- 10 Ministry of Energy, Department of Power, *Report of the Committee on Power* (1980), p.21.

- 11 *CSSRI*, pp.60–61.
- 12 A.V. Desai, "The Indian Electric Power System," *Economic and Political Weekly*, Vol.22, No.21 (October 10, 1987), p.1756.
- 13 National Thermal Power Corporation, *13th Annual Report, 1988–89*, p.10.
- 14 Centre for Monitoring the Indian Economy (Bombay), *Current Energy Scene in India* (hereafter *Current Energy*), July 1989, p.2-43.
- 15 Ministry of Energy, Department of Power, *Report of the Committee on Power* (1980), p.21.
- 16 India has been divided into five "power regions": the northern, southern, eastern, western, and northeastern power regions.
- 17 NTPC includes within its projects power generation for the Delhi Capital Region. Recently it has introduced a proposal to build a new plant in Haryana. It is not clear, however, whether this move indicates a revision of its policy to locate in coal-rich areas, or even if the new facility will in fact supply the Delhi Capital Region (*Indian Express*, November 17, 1990).
- 18 NTPC chairman P.S. Bami has expressed the opinion that these patterns will probably continue into the next century (*Indian Express*, November 17, 1990).
- 19 This figure is based on information contained in Ministry of Energy, Department of Power, *Report, 1985–86 through 1988–89* editions.
- 20 Central Electricity Authority, *State Electricity Boards Financial Performance Review, 1980–1985*, August 1988. pp.22–23.
- 21 *Ibid.*, pp.55, 59. PFC was also involved after 1987/88 in lending capital for repair and modernization of thermal power plants, to assist in the completion of ongoing construction projects, and help cover the costs of power transmission operations. Its annual loan disbursement is nearly equal to that of REC.
- 22 The results of these hearings are contained in Ministry of Energy, Department of Power, *Report of the Committee on the Tariff for Electricity Supply from Central Thermal Power Stations*, January 1986.
- 23 *Ibid.*, pp.7–10.
- 24 National Thermal Power Corporation, p.21.
- 25 See the concluding section to Chapter 3.
- 26 National Thermal Power Corporation, p.20. The arrears summarized in Table 4-5 came to 1.73 times the budgeted power outlays for 1989 in Uttar Pradesh, 5.28 times the amount in Bihar, 3.43 times in Haryana, 0.60 times in Madhya Pradesh, and 4.28 times in Rajasthan. For what has happened since then, see *Indian Express*, April 19, 1990.
- 27 *Economic Times*, July 4, 1989 and November 9, 1989; *Indian Express*, April 19, 1990.
- 28 A village is considered "electrified" if at least one location is being supplied through electrical power line transmission. *Current Energy*, July 1990, p.2-14.
- 29 *Ibid.*, p.2-16.
- 30 Ministry of Energy, Department of Power, *Report, 1985–86 through 1988–89* editions.
- 31 The above explanation is based on *CCSRI*, pp.311–12 and *CCSR2*, pp.125, 285–86, 438, 515–56.
- 32 *CCSRI*, p.311. According to Government of West Bengal, *Memorandum Submitted to the Sarkaria Commission* (1984), p.22, the central government's lending rate was 9.25 per cent.

- 33 *CCSR1*, p.311.
- 34 *Economic Times*, February 2, 1990.
- 35 Ibid.
- 36 *CCSR2*, p.286 for Kerala; and Government of West Bengal, *Memorandum Submitted to the Sarkaria Commission* (1984), p.22 for West Bengal.
- 37 Government of West Bengal, *West Bengal*, October 1, 1988, p.337.
- 38 Government of West Bengal, *A Note on Haldia Petrochemicals Project and Bakreshwar Thermal Power Project*, August 4, 1988, pp.4–6.
- 39 Government of West Bengal, *West Bengal*, August 1, 1990, p. 248.
- 40 *CSSR1*, p.312.